

Appl. No.: 10/690,793
Amdt. dated: 04/10/2009
Reply to Office action of: 01/15/2009

REMARKS / ARGUMENTS

In the Office action of January 15, 2009, claims 1-45 were rejected. The applicants request amendment of the application as indicated above and withdrawal of the rejection.

Claims 31-45 stand rejected under 35 U.S.C. 112 as indefinite because the term "said second application" in claim 31 lacks an antecedent basis and, since claim 31 is indefinite, dependent claims 32-45 are also indefinite. The applicants request amendment of claim 31 as indicated above; submit that claim 31, as amended, is definite; and request withdrawal of the rejection of claims 31-45.

Claims 1-5, 8-10, 12-13, 16-20, 23-25, 27-28, 31-35, 38-40, 42 and 43 stand rejected under 35 U.S.C. 103 as unpatentable over Sorrentino et al., U.S. Patent No. 7080060 (Sorrentino) in view of Veselov, U.S. Patent No. 7131120 (Veselov). While the Office action concedes that Sorrentino does not disclose notifying an application associated with a listener when another application causes an event in a shared object, the Office action asserts that Sorrentino does teach a listener attached to a shared object and operably associated with a second application running in a second machine and "listening for the event" (citing Sorrentino: col. 3, line(s) 41-58) and asserts that Veselov teaches "shared object and operably associated with a second application running in a second machine and notifying the second application when the first application caused the event" (citing Veselov; col. 4, line(s) 44-48; col. 5, line(s) 1-21).

Veselov, col. 5, line(s) 1-21 mentions a listener in connection with communication channels that enable communication between "library objects" using an inter-application messaging method, such as, the Java Messaging Service (JMS) which, according to Veselov, can be used to transmit queries and requests and provides three ways of sending messages. The only reference to a "listener" in Veselov is at col. 5, line(s) 6-21 which describes a plurality of listeners each receiving, in turn, a respective message until a message has been received by each listener, starting a new "round robin cycle." While the listener disclosed by Veselov is clearly limited to the "round robin" communication method, the current Office action introduces and relies on a new reference, Haase, JAVA MESSAGE SERVICE API TUTORIAL (Haase), for teaching that a message listener is also used with the JMS publish and subscribe messaging method, which Veselov mentions by name but does not describe (col. 5, line(s) 13-14).

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According to Haase, the JMS listener monitors a message queue and when a message addressed to a subscribing destination arrives in the queue, a JMS provider delivers the message by calling a method in the listener (Haase, pg. 19). However, the applicants respectfully submit that neither Haase nor Veselov disclose or suggest that the JMS listener of Veselov is either stored in the shared object space, attached to a shared object, or listening for an event in a shared object, all as recited in the claims. As conceded by the Office action of August 24, 2007, page 6; Veselov does not "disclose that a listener is associated with at least one of the applications running on a virtual machine that is listening for the event."

Sorrentino discloses a listener adapted to acknowledge requests for data access from one or more system processes or services and to connect the requesting service to a respective query thread (Sorrentino, Abstract). In general, the listener of Sorrentino "preferably loops or remains in a wait state until it receives a data access request message from an application service 212" (Sorrentino: col. 3, line(s) 33-35). The listener may establish communication with the requesting service, preferably endeavors to assign one of the query threads for the requesting service, and then returns to the wait state where it awaits additional requests (Sorrentino: col. 3, line(s) 41-60) but, contrary to the Office action, Sorrentino, including the portion relied on in the Office action, does not disclose or suggest that the listener is listening for the occurrence of an event in a shared object that is caused by an application not associated with the listener. Nothing in Sorrentino suggests that the listener is monitoring or can monitor a shared object for the occurrence of an event. In addition, the listener of Sorrentino communicates only with the requesting application service and there is no suggestion in Sorrentino that even if an event was detected that the listener would place a message addressed to an application that did not cause the event in a message queue or otherwise notify an application of the occurrence of the event unless the application was associated with the listener and had requested the event. The applicants submit that neither Sorrentino nor Veselov disclose a listener that is operably associated with a first application and attached to a shared object that is listening for an event in the shared object that is caused by a second application.

The Office action asserts that it would have been obvious to incorporate the teaching of Veselov into the method of Sorrentino because a person of ordinary skill "would utilize virtual machine application to share resources to have a platform independent application execution

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with shared resources and notify all applications about events messages received in the message queue to notify the current state of the system using JMS messaging technology of publish and subscribe.” However, while virtual machines, platform independent execution, and JMS messaging technology are disclosed in Veselov; the later disclosure, Sorrentino, includes none of the supposedly motivating features and neither Veselov nor Sorrentino describe or utilize the JMS publish and subscribe messaging method. Even if it is assumed that the motivation suggested by the Office action is sufficient motivation for combining the teachings of Sorrentino and Veselov, the objectives suggested by the Office action could be achieved by a system in which each of the prior art listeners performs its separate prior art function, but a system with two listeners, neither of which is the listener recited in the claims, would not anticipate or suggest the claimed system. Therefore, the Office action opines that it would be obvious to persons of reasonable skill, motivated by the desire for a virtual machine application, to combine the teaching of Sorrentino and Veselov by creating a new listener having a combination of attributes not suggested by either Veselov or Sorrentino but identifiable by parsing the description of the listener in the application. The applicants respectfully submit that there is no teaching or suggestion provided in the prior art of record to create a new listener by combining the prior art listeners as suggested by the Office action. In addition, the prior art does not suggest a motivation for creating a new listener and a new listener would not be necessary and is not suggested by a desire for a virtual machine application as suggested in the Office action. Moreover, the experimentation necessary to create of a new listener is contraindicated by the suggested motivation to use JMS messaging technology which already includes a listener which would be jettisoned with the creation of a new listener.

The applicants submit that claims 1, 16 and 31 are not obvious from the prior art of record because neither Veselov nor Sorrentino disclose or suggest a listener that is operably associated with a first application and attached to a shared object that is listening for an event in the shared object that is caused by a second application and, therefore, a combination of the prior art does not disclose or suggest the listener of the claimed system and neither the prior art nor the Office action suggest a motivation for creating a new listener having attributes that are taught only by the application. The applicants respectfully submit that a listener, as recited in the claims, is taught only by the applicants and by parsing the description of the listener recited in

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the claims to identify features for a new listener, the Office action uses the applicants' own teaching as the basis for concluding that the applicants' teaching is obvious. The applicants request withdrawal of the rejection of claims 1, 16 and 31.

In addition regarding claims 16 and 31, the applicants respectfully that neither Sorrentino nor Veselov discloses a listener able to identify an application, other than the application with which the listener is associated, as the application causing an event in the shared object. The Office action asserts that Veselov teaches using the JMS messaging service to communicate between multiple applications (col. 5, line(s) 11-17) and the JMS "queue and request having the identification of the requester in the request (message) to identify the request and other information related to the request and notify other application using publish and subscribe communication mechanism" citing Veselov: col. 2, line(s) 24-38; col. 5, line(s) 1-21; and col. 7, line(s) 59-67 - col. 8, line(s) 1-7, lines 46-65; FIG. 7, reference 704. Veselov discloses a method in which a request, which includes the identity of the application making the request, is transmitted by an inter-application communication method, such as JMS, to slave repositories in non-requesting applications and copied to those slave repositories. While the message delivered by the JMS listener includes the identification of the "requester" of an event in a shared object and the portions of Veselov cited by the Office action indicate that the application receiving a request in its repository may be able identify the requestor of an event, Veselov, col. 5, line(s) 15-21, says nothing about the listener being able to identify the requestor of an event from the message that the listener is distributing.

The prior Office action asserted that JMS is also capable of delivering messages point to point "which is not possible if the listener is not able to identify the application that is requesting and the resource that is being requested" and the current Office action opines with regard to the JMS message listener that "the identification of the application allows the listener in the JMS system to process the request to the specific object or resource request as requested and notify all the applications about events messages received in the message queue to notify the current state of the system using the JMS messaging technology of publish and subscribe" (Office action, page 7). According to Haase, page 17, in the point-to-point messaging method each message is addressed to a specific queue and the receiving client extracts messages from the queue established to hold the client's messages. Similarly, messages are delivered to a "topic,"

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a queue accessible to a plurality of subscribing applications with the publish and subscribe method and a listener may be assigned by a message consumer at a destination application to retrieve messages addressed to the destination application from the appropriate queue or topic and deliver them to the destination. According to Haase, page 9, in the loosely coupled JMS messaging method:

The sender does not need to know anything about the receiver; nor does the receiver need to know anything about the sender. The sender and receiver need to know only what message format and what destination to use.

The Office action does not explain why the listener's knowledge of the requester of an event would be required for point-to-point communication, but the applicants respectfully submit that the JMS listener, the receiver's agent, needs to know nothing more about the sender than the JMS message receiver and, according to Haase, in the JMS messaging method, the JMS message receiver does not need to know anything about the sender, and, more particularly, does not need to anything about the requester of an event in a shared object. To retrieve a message from a designated message queue and deliver it to a destination application, the JMS message listener requires only the identity of the destination, which according to Haase, page 30, is designated in header of the message and which, as recited in the claim, is not the requestor of the event. Neither Veselov nor Haase suggests that the listener is processing "requests to a specific object or resource" or any other reason for the JMS listener of Veselov to retrieve of the identity of the "requestor" of an event from a message. The applicants submit that the prior art of record does not disclose or suggest a listener as recited in claims 16 and 31 and the claims are not obvious for this further reason. The applicants request withdrawal of the rejection.

Further, with regard to claim 31, the applicants submit that the prior art does not disclose a listener that is able to identify a non-associated application as the application causing an event from a header included in the shared object. The Office action asserts that the claim language does not clarify "how or which object header holds the information of the application which sends the request as there are two different object wherein the object referring to a sub-object that holds the actual identification information in the specification." This observation is unclear to the applicants because while the Office action refers to sending a request and "two different

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objects;" claim 31, which is consistent with the specification, paragraph [0097], makes no reference a request and recites a single object, the shared object, which includes a header that identifies the application causing an event.

The applicants also admit confusion concerning the examiner's interpretation of "the JMS queue as the object that holds the request with the request identifying the application and also notifies other applications." While Veselov discloses a shared resource that can be locked to one of a plurality of applications, each including a library object (col. 4, line(s) 61-67), it is clear from Veselov that the JMS message queue is part of a communication channel between library objects and is not a shared resource or object in which an application causes an event. Further, there is no indication in Veselov that the JMS message queue is stored in the shared object space as recited in claim 31 or that the message queue notifies other applications as asserted in the Office action.

While the "request" of Veselov includes the identity of the requester and an application receiving a copy of a request can determine the identity of the requestor of an event from the request, nothing in Veselov suggests that this information is included a header of a message queue or in the header, as opposed to the body, of a message or that the identity of the requestor of an event is accessible to the JMS message listener. According to Haase, section 3.6.1, pgs. 29-30, the JMS message header includes the identity of the message's destination but there is no suggestion that the identity of an application causing an event in a shared object, which, as recited in the claim, is not the destination of the message, is included in the message header. Moreover, Veselov does not suggest how or why a message listener, extracting a message from a message queue and delivering the message to a destination application that did not cause the event, would utilize the identity of the application causing the event even if the information was available to the listener. The applicants submit that none of Sorrentino, Veselov, or Haase teach or suggest a listener that is able to identify an application causing an event in a shared object from a header of the shared object and request withdrawal of the rejection of claim 31 for this further reason.

With regard to claims 2-5, 8-10, 12, 13, 17-20, 23-25, 32-35, 38-40, 42 and 43, the applicants submit that the respective claims are dependent from one of claims 1, 16 or 31 or a claim dependent from one of claims 1, 16 or 31 and each inherits all of the limitations of the

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claim(s) from which it respectively depends. Since claims 1, 16 and 31 are not obvious from Sorrentino and Veselov for the reasons stated above; claims 2-5, 8-10, 12, 13, 17-20, 23-25, 32-35, 38-40, 42 and 43 are, likewise, not obvious. The applicants request withdrawal of the rejection and the allowance of the claims.

Claims 6, 7, 21, 22, 36 and 37 stand rejected under 35 U.S.C. 103(a) as unpatentable over Sorrentino, in view of Veselov and in view of DeMaster, U.S. Patent No. 6066181 (DeMaster). Claims 6, 7, 21, 22, 36 and 37, are dependent from one of claims 1, 16 or 31 or a claim dependent from one of claims 1, 16 or 31 and each inherits all of the limitations of the claim(s) from which it respectively depends. Since claims 1, 16 and 31 are not obvious from Sorrentino and Veselov for the reasons stated above and since DeMaster does not obviate the differences between the claims and Sorrentino and Veselov; dependent claims 6, 7, 21, 22, 36 and 37 are, likewise, not obvious. The applicants request withdrawal of the rejection and the allowance of the claims.

Claims 11, 14, 15, 26, 29, 30, 41, 44, and 45 stand rejected under 35 U.S.C. 103(a) as unpatentable over Sorrentino, in view of Veselov and in view of Barinov et al., U.S. Patent Publication No. 2004/0025171 (Barinov). Claims 11, 14, 15, 26, 29, 30, 41, 44, and 45 are dependent from one of claims 1, 16 or 31 or a claim dependent from one of claims 1, 16 or 31 and each inherits all of the limitations of the claim(s) from which it respectively depends. Since claims 1, 16 and 31 are not obvious from Sorrentino and Veselov for the reasons stated above and since Barinov does not obviate the differences between the claims and Sorrentino and Veselov; dependent claims 11, 14, 15, 26, 29, 30, 41, 44, and 45 are, likewise, not obvious. The applicants request withdrawal of the rejection and the allowance of the claims.

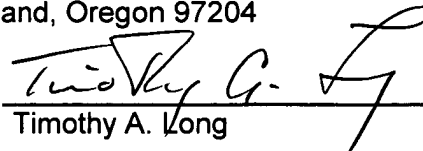
The applicants respectfully request that a timely Notice of Allowance be issued in this case. If the Examiner believes that for any reason direct contact with applicants' attorney would

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advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the number below.

Respectfully submitted,
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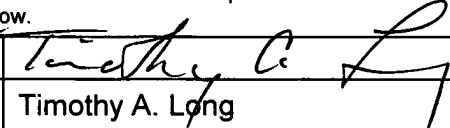
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